

CLAIMS:

1-56. Canceled.

57. (New) A method for use in a packet network that carries at least two traffic classes, the method comprising

selecting individually for each link of a plurality of links of said network a particular desired mix of the average rates of traffic among the traffic classes on that link during times of network congestion, and

configuring parameters within said network in such a way that said mix of average traffic rates is substantially achieved.

58. (New) The method of claim 57 wherein one of said parameters is bandwidth allocated to at least one said traffic classes.

59. (New) The method of claim 57 wherein said mix of average traffic rates is selected in such a way as to achieve a desired set of packet loss criteria for said traffic classes on said each link.

60. (New) The method of claim 59 wherein said set of packet loss criteria further includes a maximum desired packet loss ratio of a first one of said traffic classes.

61. (New) The method of claim 59 wherein said set of packet loss criteria further includes a substantially zero packet loss ratio of a first one of said traffic classes during periods of congestion over said each link.

62. (New) The method of claim 60 wherein said set of packet loss criteria includes a desired maximum value, during periods of congestion over said each link, of a quantity that is a function of

- a) a packet loss ratio of a second one of said traffic classes and
- b) a packet loss ratio of a third one of said traffic classes.

63. (New) The method of claim 62 wherein said function is the ratio of a) to b).

64. (New) The method of claim 63 wherein one of said set of packet loss criteria is that a quantity given by

- a) the difference between
 - i) a packet loss ratio of said second and third traffic classes combined, and
 - ii) a packet loss ratio of all of said traffic classes combined, divided by
- b) said packet loss ratio of all of said traffic classes combined is no larger than a particular selected value.

65. (New) The method of claim 63 wherein one of said set of packet loss criteria is that a quantity given by

- a) the difference between
 - i) a packet loss ratio of said third traffic class, and
 - ii) a packet loss ratio of said second and third traffic classes combined, divided by
- b) said packet loss ratio of said second and third traffic classes combined is no larger than a particular selected value.

66. (New) The method of claim 64 wherein one of said set of packet loss criteria is that a quantity given by

- a) the difference between
 - i) a packet loss ratio of said third traffic class, and
 - ii) a packet loss ratio of said second and third traffic classes combined,

divided by

b) said packet loss ratio of said second and third traffic classes combined is no larger than a particular selected value.

67. (New) The method of claim 62 wherein the average packet loss ratio of said first traffic class is less than the average packet loss ratio of said second traffic class and the average packet loss ratio of said second traffic class is less than the average packet loss ratio of said third traffic class.

68. (New) A method for use in a packet network that carries first, second and at least a third traffic classes, the method comprising

selecting individually for each link of a plurality of links of said network a particular desired mix of the average rates of traffic among the traffic classes on that link during times of network congestion, and

configuring parameters within said network in such a way that said mix of average traffic rates is substantially achieved.

69. (New) The method of claim 68 wherein one of said parameters is bandwidth allocated to at least one said traffic classes.

70. (New) The method of claim 68 wherein said mix of average traffic rates is selected in such a way as to achieve a desired set of packet loss criteria for said traffic classes on said each link.

71. (New) The method of claim 70 wherein said first traffic class is provided with a lower packet loss ratio than said second traffic class and said second traffic class is provided with a lower packet loss ratio than said at least third traffic class.

72. (New) The method of claim 71 wherein said set of packet loss criteria includes a desired maximum value, during periods of congestion over said each link, for a quantity that is a function of packet loss ratios of said second and said at least third traffic classes.

73. (New) The method of claim 72 wherein said quantity is a function of the packet loss ratio of said second traffic class divided by the packet loss ratio of said at least third traffic class.

74. (New) The method of claim 72 wherein said set of packet loss criteria further includes a maximum desired packet loss ratio of said first traffic class.

75. (New) The method of claim 74 wherein one of said set of packet loss criteria is that any percentage increase, beyond an overall packet loss ratio of said traffic classes, in a combined packet loss ratio of said second and at least a third traffic classes that results from any decrease of a packet loss ratio of said first traffic class below said overall packet loss ratio, is no more than a particular amount.

76. (New) The method of claim 72 wherein said set of packet loss criteria further includes a substantially zero packet loss ratio of said first traffic class during periods of congestion over said each link.

77. (New) The method of claim 76 wherein one of said set of packet loss criteria is that any deterioration in a combined packet loss ratio of said second and at least a third traffic classes that results from any decrease in a packet loss ratio of said first traffic class is no more than a selected percentage of the overall packet loss ratio of all of said traffic classes.

78. (New) The method of claim 77 wherein one of said set of packet loss criteria is that any deterioration in a packet loss ratio of said at least third traffic class that results from any decrease in a packet loss ratio of said second other traffic class is no more than a particular percentage of a packet loss ratio of said second and at least a third traffic classes combined.

79. (New) The method of claim 74 wherein one of said set of packet loss criteria is that any percentage increase, beyond a combined packet loss ratio of said second and at least a third traffic classes, in a packet loss ratio of said at least third traffic class that results from any decrease of a packet loss ratio of said second traffic class below said combined packet loss ratio, is no more than a particular amount.